

REMARKS

Applicant thanks the Examiner for the telephone conference conducted November 30, 2006. Applicant is particularly grateful for the complete discussion of the operation of the present invention and the prior art references. This permitted the parties to reach agreement on the allowability of the claims and the reasons for the distinctiveness over the prior art. Applicant also thanks the Examiner for the courtesy of extending the date for holding the conference due to unexpected snow storm and ice covered roads in Seattle. (Below freezing weather for three days preceded by rain and wet snow caused such dangerous conditions on the roads that public schools were closed for three days in the Seattle area and public transportation had little to no operation. Graciously, the Examiner rescheduled the planned telephone conference of November 28 to November 30, 2006, based on applicant's attorney's request due to the weather, for which again, the Examiner is greatly thanked.)

During the telephone conference, the Examiner forwarded English Translations of the Japanese references to the applicant by email, so that a common translation could be used in the discussion. (Applicant's attorney had a Japanese patent attorney assisting in the translation prior to these being sent.) Applicant also thanks the Examiner for forwarding the English language translations of these references which she had recently obtained, so that the detailed merits of the case could be discussed. This response to the Office Action relies on these English translations as provided by the Examiner, once again, for which the Examiner is thanked.

Applicant pointed out the distinctive features of the claims during the Examiner's telephone conference and the reasons why the current claims should be allowable. It was agreed during the telephone conference that the claims would be allowed based on the distinctions which were discussed in the telephone conference, on the agreement that applicant's attorney would provide a detailed written explanation of the distinctions over the prior art which were presented in the telephone conference. These remarks provide that distinction and a written explanation of the claim features which are distinctly different from those of the prior art.

If, after reading these written remarks, the Examiner believes that more detail written explanation is desired explaining the distinction of the present invention over the prior

art, or amendments to the claims she is invited to contact applicant's attorney by telephone or email so that we may provide any additional written supplementation to confirm the statements made during the telephone interview for agreement to allow the claims.

Applicant's attorney points to a specific feature within the claims. Claim 1, the last full paragraph, and claim 36, the last full paragraph, both describe a foam material in the form of distinct areolas on the support surface of a structure which contains at least three layers above it. This limitation is in all independent claims, namely claims 1 and 36. The meaning of this limitation can be seen in Figure 1, as was discussed during the telephone conference. The foam material is layer 7 which is a material having a structure with distinct areolas. As is clear looking at Figure 1, each of the foam bumps 7 have a spacing 6 positioned between the bumps. Namely, the foam has distinct and separate bumps or islands of the foam material. The foam, although referred to as a layer, contains distinct individual bumps, called "distinct areolas" in each of the claims as individual separate foam pieces positioned on the bottom surface of the undermost layer. The use of the word "distinct" which is in claim 1 and in claim 36 is stated as "distinct areolas" using this language to refer to the bumps 7 being physically shaped so that they are not a contiguous foam layer with mere undulations. Rather, each of the foam bumps 7 is a distinct bump by itself. While the space 6 can be very small; namely the foam bumps 7 touching at some locations on their edges, they are still distinct as being separate members.

The importance of having "distinct areolas" or distinct bumps positioned on the bottom surface of the layer provides substantial advantages in the inventive support material as explained during the telephone conference.

The present layer is intended to be used underneath a flooring, for example, a wooden, marble, ceramic tile or parquet floor. Normally, a home or business in which the invention will be used has a concrete or cement foundation as the base layer. While it is technically possible to lay ceramic tile, wood, parquet or other flooring directly on the concrete foundation itself, often such foundations have a rough finish, may be slightly uneven, or have moisture reasons why placing the floor material directly onto the cement itself is not beneficial for the long-term stability of the floor material. Accordingly, this invention is intended to be a

support layer between a lower concrete or cement foundation and the floor layer, such as a wooden, parquet, or ceramic tile floor.

It is desired that the flooring have a solid base with sufficient support that after the flooring is installed over concrete, that the flooring in place for many years it not crack or separate at its joints after many years of use. Even if the concrete foundation cracks, it is desired that the flooring above not separate or crack.

As was discussed during the telephone conference, if a wood parquet or ceramic tile floor is installed, and grout or other adhesive is present, if the layer surface is too soft, then as weight is placed on different portions of the upper floor, the foam may be compressed sufficient to cause separation of the tile and cracking at the joints between the individual tiles or wood members. Within a short period of time, this would cause destruction of the floor and the floor would need to be replaced. Therefore, the inventive support layers which go below such flooring must be sufficiently solid and immovable as to provide that there is no separation at the floor joints and the floor remains flat. On the other hand, the inventive floor support layers must have sufficient flexibility to account for minor variations in the concrete foundation on which the floor is to be placed.

The layer also has the advantage of preventing any infiltration of moisture from the concrete substrate and heat insulating advantages.

Another desired property of the support layer is that it even out any blemishes or imperfections in the substrate layer.

Accordingly, the foam layer 7 of distinct bumps provides some give in order to provide an overall level floor even if there are minute imperfections and unevenness at different locations in the substrate. The foam layer 7, by the use of the distinct areolas, is more able to easily accommodate for any such minor imperfections while also providing a very solid base.

Looking again at Figure 1, it can be seen that the distinct bumps 7 can be completely compressed and have room into which they can even out, which would include the spacing between them prior to being laid down and compressed. Thus, by using distinct areolas, the foam layer 7 provides the dual advantage that the foam layer can even out the imperfections while also bottom out, namely become substantially flat with little spring force left since space is

provided in which the foam can be pushed so that it can be fully compressed to simulate a quite hard surface.

Turning now to the prior art of the two Japanese references provided by the Examiner, JP9324523 to Funase and JP9-100618 also to Funase. Neither of these two references show a foam layer in the form of "distinct areolas." Turning first of all to Japanese reference JP9324523, Figure 1 can be seen to show a cushioning floor material 1 which has a soft foam material 2 and a granular material 3. See page 4 and Figures 1-10 of the translation provided by the Examiner. Of some significance to the present invention is Figure 7 which shows protrusions 21B in the foam material 2. As pointed out on page 8 of the Japanese translation, the purpose of the protrusions 21B is so that they can be compressed more easily. As can be seen, the protrusions 21B are part of a contiguous foam layer 2B and, as shown in Figure 7 recesses, 20B of the same foam material are a contiguous part of the same layer. Namely, the layer 2B has undulations which include ridges and valleys as a single contiguous layer. There are no distinct areolas of foam material or no distinct bumps, rather, the foam material is one integral, contiguous material with each of the bumps 21B connected to each other by foam material 22B of the very same layer and the same material. Thus, this prior art reference clearly lacks the distinct bumps 7 of the claimed invention and also does not provide the advantages of the present invention in which the bumps are distinct from each other in order to provide an improved hard support for the flooring thereover.

Turning now to Japanese reference JP9-100618 also to Funase. Figure 4 shows a foam layer 2 having protrusions 2A and recesses 2B. On top of this is another foam layer having matching protrusions 2A and recesses 2B. These respective protrusions are aligned with each other so that the thickness difference between positions 2A and 2B is more pronounced, when they are constructed back to back as shown in Figure 4. As is clear from the description of Figure 4, and as can be seen in the Figures, the protrusions 2A are merely raised undulations from the entire layer 2 and not distinct bumps or distinct areolas. Instead, the protrusions 2A are part of a contiguous foam layer and are coupled to the recesses 2B by a single contiguous layer without the bumps being distinct from each other. According to Funase this provides a higher spring constant. Namely, when the protrusions 2A are further compressed into the foam so that

the recesses 2B have disappeared, the spring constant of the soft material 2 increases higher than the spring constant previously. See page 5, first full paragraph of the translation.

In summary, the prior art completely fails to show a foam layer in the form of distinct bumps or distinct areolas as claimed and all claims should now be allowed as discussed and agreed to in the telephone conference.

Applicant's attorney wishes to point out an additional reason why claim 1 is also patentable in light of the prior art. Claim 1 contains the additional feature of "a layer of adhesive absorbing material positioned on the top of the outer surface of the first layer." The prior art uses a plastic layer which is not adhesive absorbing.

There is no indication in the prior art that the uppermost layers of Poteet include an adhesive absorbing material. In fact, it appears that the backing layer of Poteet is readily detachable from a glue layer and that it does not absorb a glue layer. The mechanism of operation of Poteet is such that a carpet can be removed so that the mechanical stress is not imparted during carpet removal. Thus, the releasable backing layer is, by definition, easily separable from the adhesive material. The other prior reference, Harkins, '258, is also missing an adhesive absorbing layer on the top of a multilayer structure to receive a flooring that goes on top of adhesive layer.

In contrast, claim 1 and current claim 39 specify that there is an adhesive absorbing material as the top outer surface of the first layer. This provides additional advantages over a hardened plastic layer or an easily removed layer as is now used in the prior art. The adhesive absorbing layer can hold the adhesive onto the inventive substrate layers so that when the above flooring is placed thereon it strongly adheres to the layer itself, which is a "physically heterogeneous and chemically homogeneous structure" of claim 1. Thus, claim 1 is patentable for additional reasons beyond the patentability of claim 36.

Allowance of all claims is respectfully requested as discussed during the telephone conference and based on the detailed explanation provided in these remarks corresponding to the discussions during the telephone conference.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,
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